MONTHLY WEATHER REVIEW,

AUGUST, 1879.

(General Weather Service of the United States.)

WAR DEPARTMENT,

Office of the Chief Signal Officer,

DIVISION OF

TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE.

INTRODUCTION.

In preparing this REVIEW the following data, received up to September 13th, have been used, viz: the regular tri-daily weather charts, containing the data of simultaneous observations taken at 132 Signal Service stations and 12 Canadian stations, as telegraphed to this office; monthly journals and means 143 and 156 respectively, from the former; reports from 37 Sunset stations; 213 monthly registers from Voluntary Observers; 17 monthly registers from United States Army Post Surgeons; Marine Records; International Simultaneous Observations; monthly reports from Voluntary Observers in, and the local Weather Service of Missouri; reliable newspaper extracts; special reports.

BAROMETRIC PRESSURE.

Upon chart No. II is shown by the isobaric lines the general distribution of atmospheric pressure, as reduced to sea-level, for the month. The barometric pressure, as compared with the means of the seven preceding years, shows that the mean of the entire country has been abnormally low. Cincinnati only shows a normal pressure. The average deficiencies for the various districts are as follows: New England, 0.08 inch; Middle Atlantic States, 0.06; South Atlantic States, from 0.05 on the coast to 0.02 in the interior; Gulf States, 0.07; Tennessee and Ohio valley, 0.02; Lower Lake region, 0.04; Upper Lake region, 0.045; Upper Mississippi and Lower Missouri valleys, 0.06; Northwest, 0.07; Rocky Mountain Slope, 0.035; San Diego, Cal., 0.10; San Francisco, Cal., 0.08; Portland, Or., 0.11.

The Local Barometric Ranges were as follows: California from 0.25 of an inch at San Diego to 0.48 at Red Bluff; Oregon from 0.51 at Roseburg to 0.63 at Olympia; Northern and Middle Plateaux from 0.59 at Salt Lake City to 0.63 at Boise City; Southern Plateau from 0.34 at Tucson to 0.55 at at Phœnix; Rocky Mountain Slope from 0.31 at Pike's Peak and 0.40 at Fort Davis to 0.74 at Dodge City and 0.85 at Cheyenne; Rio Grande valley from 0.48 at Rio Grande City to 0.55 at Brackettville; Western Gulf States from 0.55 at Indianola to 0.91 at Shreveport; Eastern Gulf States from 0.26 at Key West to 0.45 at Mobile; South Atlantic States from 0.42 at Augusta to 1.05 at Cape Lookout; Middle Atlantic States, from 0.47 at Philadelphia to 0.99 at Kittykawk and 1.22 at Cape Henry; New England States from 0.51 at Springfield to 1.05 at Eastport, 1.07 at Newport and 1.13 at Wood's Holl; Ohio valley and Tennessee from 0.51 at Columbus to 0.76 at Cairo; Lower Lake region from 0.46 at Toledo to 0.63 at Oswego; Upper Lake region from 0.50 at Chicago to 0.75 at Alpena; Upper Mississippi valley from 0.49 at Davenport to 0.64 at St. Paul; Red River of the North valley from 0.63 at Pembina to 0.67 at Breckenridge; Lower Missouri valley from 0.63 at Leavenworth to 0.69 at Yankton.

Areas of High Barometer.—No areas of high barometer of particular energy have passed over the country during the month, but the four following are the most important:

No. I.—This area was present off the North Carolina coast on the morning of the 1st—Cape Lookout and Cape Hatteras barometers 0.29 abnormally high. This pressure remained nearly stationary until the morning of 2nd. During this time fresh southeast to southwest winds, with partly cloudy weather and no rain, prevailed in the South Atlantic States, and fresh variable winds, mostly southerly, were reported from the Gulf States, with heavy rainfalls; that at St. Marks, amounting for the twenty-four hours ending at the afternoon report of the 1st, to 10.81 inches, being probably the heaviest ever reported from a Signal Service station in one day. On the 2d the pressure gradually dissipated, during which day fresh southerly winds, with cloudy weather and rain, generally prevailed in the South Atlantic States.